The WESTERN RAILROADER

For the Western Railfan

No. 601 at Lemon Cove station.—H. Huntington collection

VISALIA ELECTRIC RAILROAD

VOL. 22, NO. 8 JUNE, 1959 ISSUE 236

VISALIA ELECTRIC EQUIPMENT ROSTER

FREIGHT ENGINES

401-402 Gasoline-Electric Locomotives built by General Electric, 1915
Built for Minnesota, St. Paul, Rochester and Dubuque Electric Traction Company (Dan Patch Road). Acquired from that company in 1916. Length 40 feet, width 9 ft. 6 in., height from top of rail to roof 15 ft. 2 in. Four GE205D 100 h.p. motors on trucks. Two Gen. Elec. GM-16 175 h.p. V-8 gas engines direct connected to T.D. 600 volt DC generators. Gear ratio 17:58. Weight 125,760 lbs. GE RM54B trucks. West. Auto Air Brakes. 401 scrapped in 1944. 402 sold to Pacific Electric Ry. on Nov. 13, 1919, and became PE 1502.

501-502 Diesel-Electric Locomotives built by General Electric, 1945
380 h.p. engines. Total wheel base 25 ft. 7 in. Fuel capacity 250 gallons. Tractive power 22,300 lbs. Gear ratio 11.25:1. Weight 89,200 lbs. loaded. 501 sold to Southern Pacific in 1950, became SP 1903, and Petaluma & Santa Rosa No. 4 in 1958.

601 (Former A-1) Baldwin-Westinghouse Electric Locomotive, 1907
Built by Westinghouse Electric and Manufacturing Co. Double truck. Length 32 ft. 2 in., width 9 ft. 9 in., height 11 ft. 8 in. Four Westinghouse 100 h.p. motors using auto. transformers, HB controls. Weight 47 tons. Total wheelbase 21 ft. 1 in. 36 in. wheels. Baldwin 84-30A trucks. Combined straight and automatic Westinghouse air brakes. XD3ED air compressor. Maximum tractive effort 23,500 lbs. Scrapped 1945.

PASSENGER EQUIPMENT

101-102 Wooden Combination Electric Motor, American Car Co., 1907
Length 46 ft. 8 in. Length Pass. Sec. 31 ft. Width 9 ft. Height 13 ft. Seating cap. 42. Baldwin 84-30A trucks, 36 in. wheels, Auto Air brakes, four West. motors, 75 h.p., 15 cy. AC, Switch (AB) controls, gear ratio 60:17. Weight 84,000 lbs.

103 Steel Combination Electric Motor, Moran, 1911
Length 58 ft. 7½ in. Width 9 ft. Height 13 ft. Seating cap. 58. Baldwin 84-30A trucks, 36½ in. wheels. West. Am. L brakes, four West. motors, 132 C., 100 h.p., battery energized unit switch controls, gear ratio 63:20. Weight 101,600 lbs.

201-202 Wooden Passenger Electric Motor, American Car Co., 1907
Length 46 ft. 8 in. Length Passenger Sec. 37 ft. 8 in. Width 9 ft. Height 13 ft. Seating cap. 50. Baldwin 84-30A trucks, 36 in. wheels, Auto Air brakes, four West. motors, 75 h.p., 15 cy. AC, Switch (AB) controls, gear ratio 60:17. Weight 62,000 lbs.

203 Steel Passenger Electric Motor, Moran, 1911
Length 58 ft. 7½ in. Width 9 ft. Height 13 ft. Seat cap. 70. Baldwin 84-30A trucks, 36½ in. wheels, West. Am. L brakes, four West. motors, 132 C., 100 h.p., battery energized unit switch controls, gear ratio 63:20. Weight 101,600 lbs.

301-302 Wooden Passenger Trailer, American Car Co., 1907
Length 46 ft. 8 in. Length Passenger Sec. 37 ft. 8 in. Width 9 ft. 2 in. Height 13 ft. Seat. cap. 50. Baldwin 84-30A trucks, 36 in. wheels, 7 ft. wheel base. Weight 62,000 lbs.

301 (Second) Gasoline Motor, Hall-Scott Motor Car Co., 1915
Length 54 ft. Width 10 ft. Height 13 ft. Seat. cap. 40. Hall-Scott MCB trucks, 33 in. wheels, air brakes. Hall-Scott gas engine, 150 h.p. 6 cyl., 4 speed manual trans., mechanical controls. Weight 76,000 lbs.

450 Steel Gas-Electric Motor, General Electric Co., 1912
Length 71 ft. 3 in. Width 10 ft. 1 in. Height 12 ft. 6 in. Seat. cap 98. MCB trucks, 33 in. wheels, air brakes. Two GE205 600 volt motors, V-8 gas engine, 175 h.p., 8 in. cyl., 10 in. stroke, 550 rpm, 80 kw. generator, generator field cut-out control.

NOTES -- 201 and 202 retired 1928. 301 and 301 sold to Pacific Electric Ry. 1919, became PE 1046-47, scrapped 1934. Second 301 acquired from Chowchilla Pacific Ry. in 1924, scrapped 1937. 450 sold to Northwestern Pacific 1921. 103 became PERy. 1364, then San Francisco, Napa & Calistoga Ry. 61. 203 became PERy. 1045, then SFN&CRy. 62.

Visalia Electric Railroad

By STEPHEN B. RENOVICH

It was in 1903 that John Hays Hammond, one of the directors of the Mt. Whitney Power Company, made plans for an electric railroad from Visalia to his 75-acre picnic grounds and bathing resort on the Kaweah River, then known as Kaweah Beach. He had location surveys made for the proposed railroad, and obtained franchises from the County of Tulare and the City of Visalia, rights-of-way and options for additional rights-of-way across private lands.

However, unable to obtain sufficient financial help to construct his railroad, Hammond on Feb. 11, 1904, signed an agreement with the Southern Pacific Company, by which the Southern Pacific Company agreed to purchase all franchises, rights-of-way, options, surveys, maps, etc., from Hammond at actual cost and to incorporate and construct an electric railroad from Visalia to Lemon Cove by the summer of 1904, using then existing Southern Pacific tracks between Visalia and Exeter, and electrifying same. Hammond likewise agreed not to build or encourage any competing electric railroad and that the Mt. Whitney Power Company, which he controlled, was to supply all electric power up to 100 horsepower at the rate of $150 per horsepower per annum for ten years. Power above 100 horsepower was to be supplied at a cost of 0.765 cents per kilowatt hour when needed. The Southern Pacific Company was to furnish all substations, transformers, and other electrical equipment.

On the 22nd of April, 1904, the Visalia Electric Railroad Company was incorporated under the auspices of the Southern Pacific Company, and all franchises, rights-of-way, etc., transferred to the newly incorporated company. It was the original intention of the Southern Pacific that if the Visalia Electric was a success, that it would then electrify its existing railroad between Visalia and Lemoore, via Goshen Junction and Armona, and to operate same as part of the Visalia Electric Railroad. At this time the Harriman lines were considering the electrification of their various lines over the mountains using 15 cycle 3300 volt, single phase alternating current, and Westinghouse equipment, and so it was decided to use this system on the Visalia Electric Railroad as a trial system.

Ground was broken for the construction of the Visalia Electric Railroad on March 15, 1905, and by November of that year the grade was completed to Lemon Cove from Exeter. The laying of track was completed in June, 1906, and operation of the railroad between Exeter and Lemon Cove began on July 1, 1906, using steam equipment rented from the Southern Pacific.

Following commencement of operation as a steam road, the el-

ectrification of the railroad was pursued and completed during 1907, and after completion of the sub-stations in the early part of 1908, electric operation, both passenger and freight, began on March 1, 1908, a distance of 21 miles.

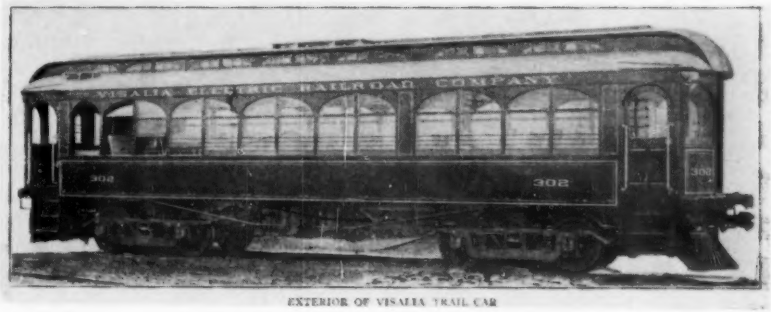
The rolling stock at this time consisted of two combination passenger and baggage motor cars, two passenger motor cars, and two passenger trailers. All of these cars were built by the American Car Company at St. Louis. The cars featured the famed Brill semi-convertible window system and full empire ceilings. High-backed, rattan-upholstered seats without arm rests were provided for the passengers. The cars were made of wood, and had monitor roofs. Pantagraphs were mounted on the center of the roofs of the motor cars. For hauling freight there was a 47-ton Baldwin-Westinghouse electric locomotive of the double swivel truck class with box type cab. This locomotive was equipped with Westinghouse air brakes, four 100 horsepower motors, and battery energized unit-switch control. Later in 1911, two steel electric motors, one of them an electric passenger-baggage combination motor, built by Moran Shipbuilding Company in Seattle, were acquired.

During 1908 the Terminus branch from Lemon Cove to Terminus on the Kaweah River was constructed. Between May 1, 1909, and June 30, 1910, an eight-mile extension from Lemon Cove to Redbanks was constructed, and in 1913 the branch from Woodlake Jct. to Rose St. was built, and completed on May 31, 1913. This branch was extended to Elderwood in 1914-15, and first operated to Elderwood on July 31, 1915.

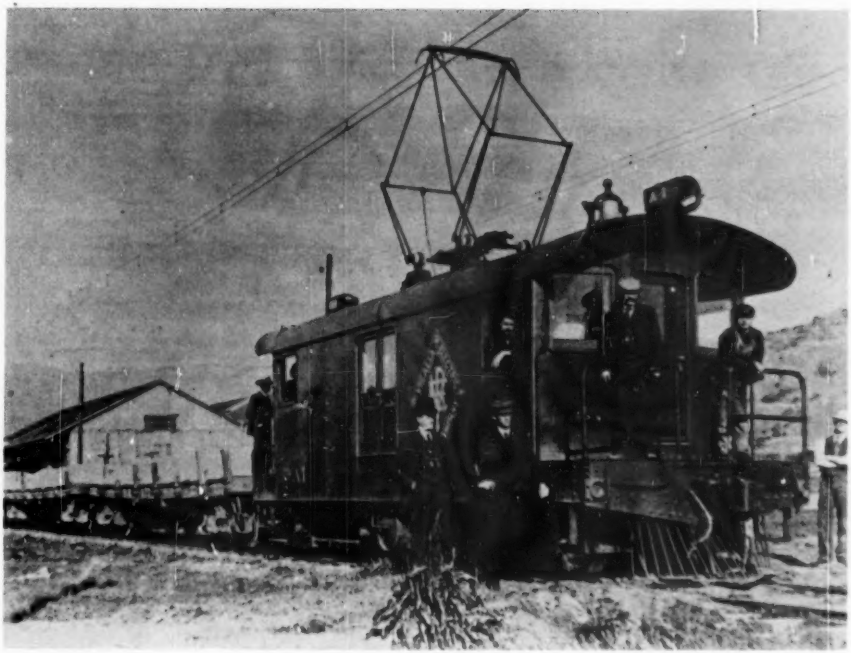
In 1916 the line from Wirts Jct. to Strathmore was built, and first operated in December, 1916, with gas-electric locomotives and a gas-electric motor car. At about the same time surveys were being made for extending the railroad from Porterville to Bakersfield, and right-of-way was acquired from Tule Jct. on the Porterville Northeastern Railway, also owned by the Southern Pacific Company, to a point about 15 miles south of Magnolia. A portion of the railroad between Tule Jct. and Magnolia, with a two-mile spur to Sunland was actually completed, as well as grading for an additional eight miles in 1916. Construction on this branch was never resumed, and in 1919, railroad and rights-of-way were sold to the Minkler Southern Railway Company, a Santa Fe subsidiary.

On June 14, 1924, the Visalia Electric Railroad Company purchased the Chowchilla - Pacific Railway from Frank G. Drum Jr. and Allen V. Drum. This railroad had been built in 1915 by the United States Farm Land Company and extended from Chowchilla to Dairyland, a distance of 10.2 miles. Passenger and express service was provided by a Hall-Scott gasoline motor car. Visalia Electric continued operation of this railroad until it leased the railroad to the Southern Pacific Company on Nov. 24, 1928. Finally on Jan. 1, 1936, the Visalia Electric Railroad Company sold this isolated branch to the Southern Pacific Company.

The electrified passenger service of the Visalia Electric provided for a total of two round trips between Visalia and Lemon Cove, and seven round trips between Visalia and Woodlake daily, two of these latter trains running on to Redbanks. The running time one way from Lemon Cove to Visalia was 56 minutes for practically all trains, nine stops having been made. The average speed was 22.5 miles per hour and the average car mileage made by passen-

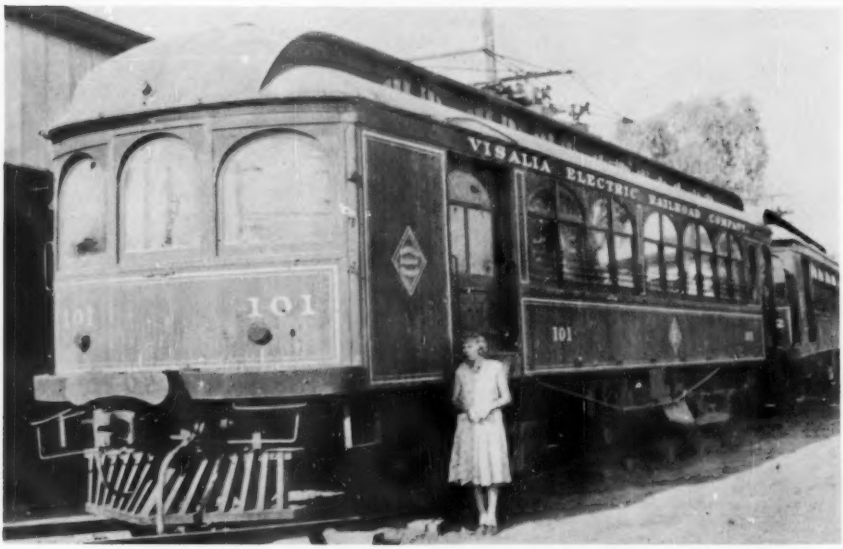


EXTERIOR OF VISALIA TRAIL CAR

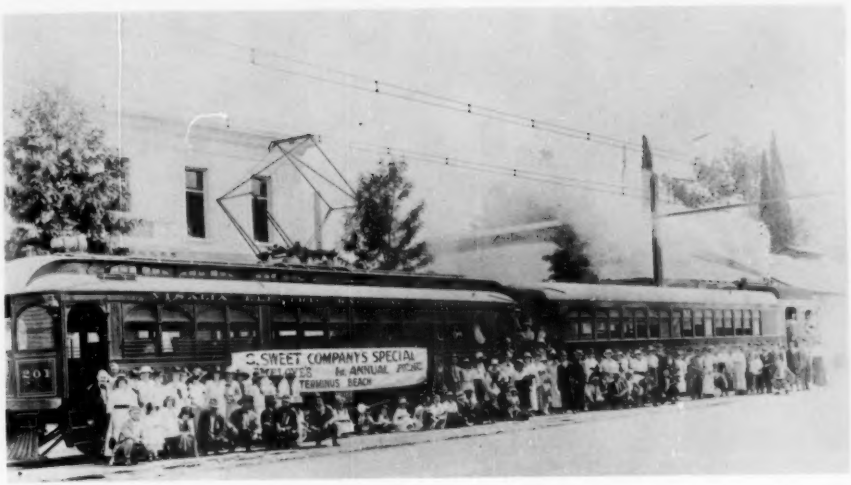


Visalia Electric freight motor A-1 on a construction train. Later renumbered 601. —Al Barker collection.

Visalia Electric combination motor 101 at Lemon Cove Depot.—H. Huntington collection.

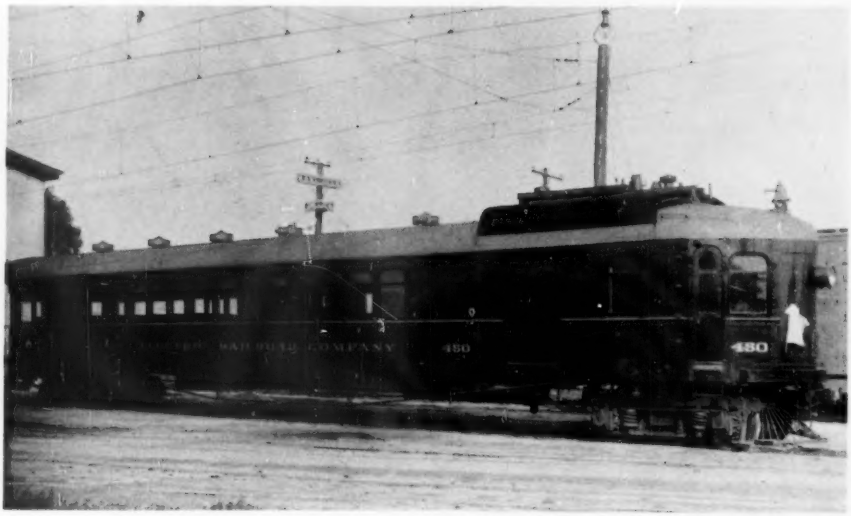


Visalia Electric combination motor 101 out of service at Exeter.—photo by L. J. Ciapponi.

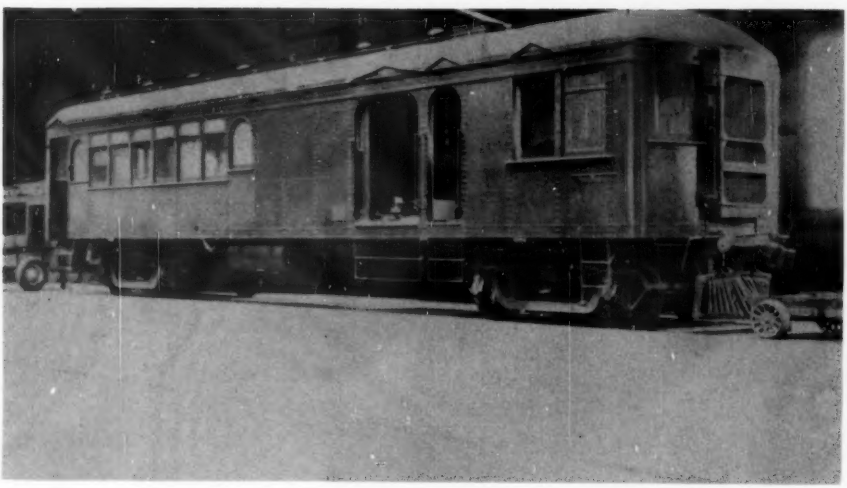


Visalia Electric picnic special enroute to Terminus Beach headed by gas-electric 450 with motor 201.—H. Huntington collection.

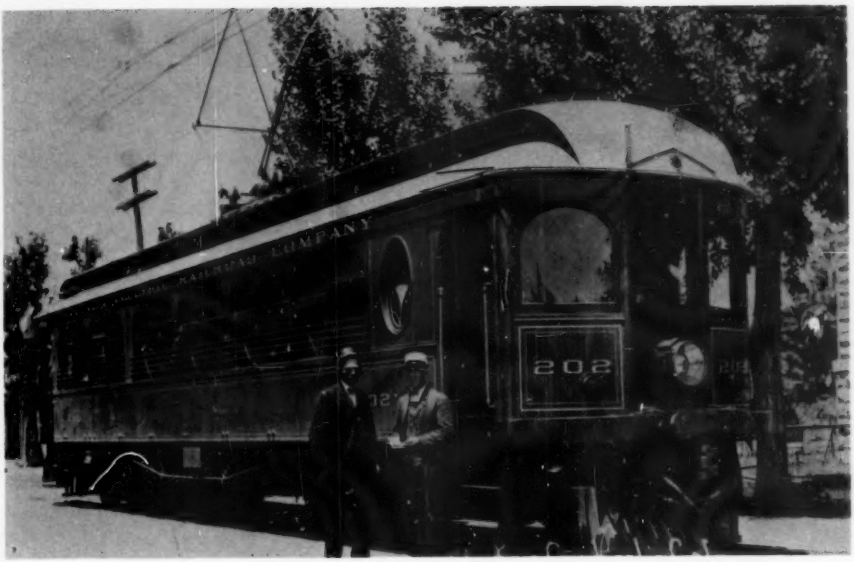
Visalia Electric picnic train at Terminus Beach headed by the 601 with cars 301, 201 and 202.—H. Huntington collection.



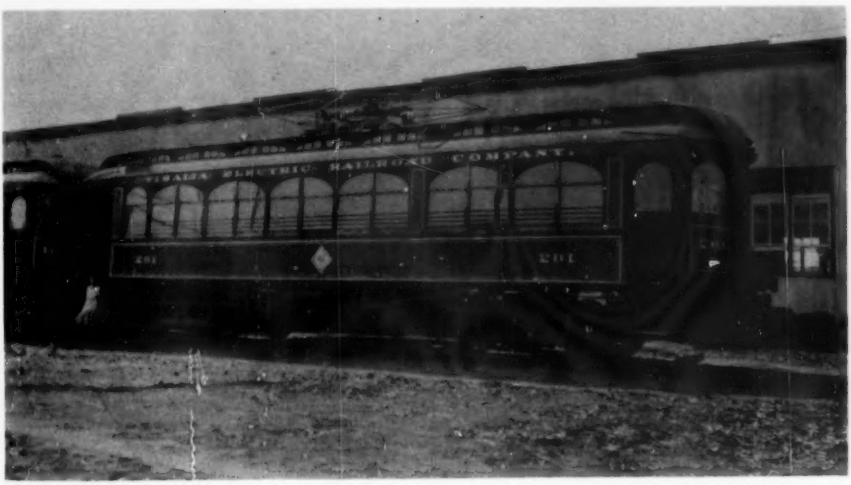
Visalia Electric gas-electric car 450 at Exeter.—P. C. Kauke collection.



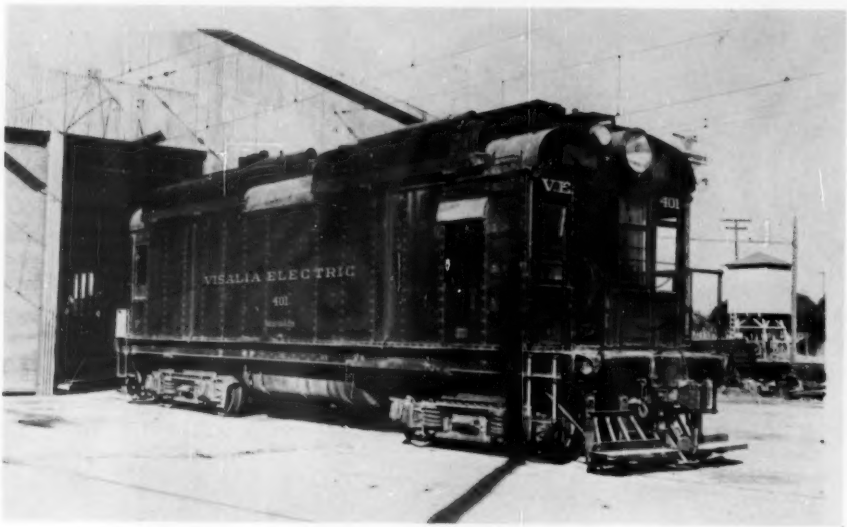
Visalia Electric Hall-Scott motor car from the Chowchilla Pacific operation in the VE barn at Exeter.—Ken Kidder collection.



Visalia Electric passenger motor 202 at Visalia.—W. C. Whittaker collection.

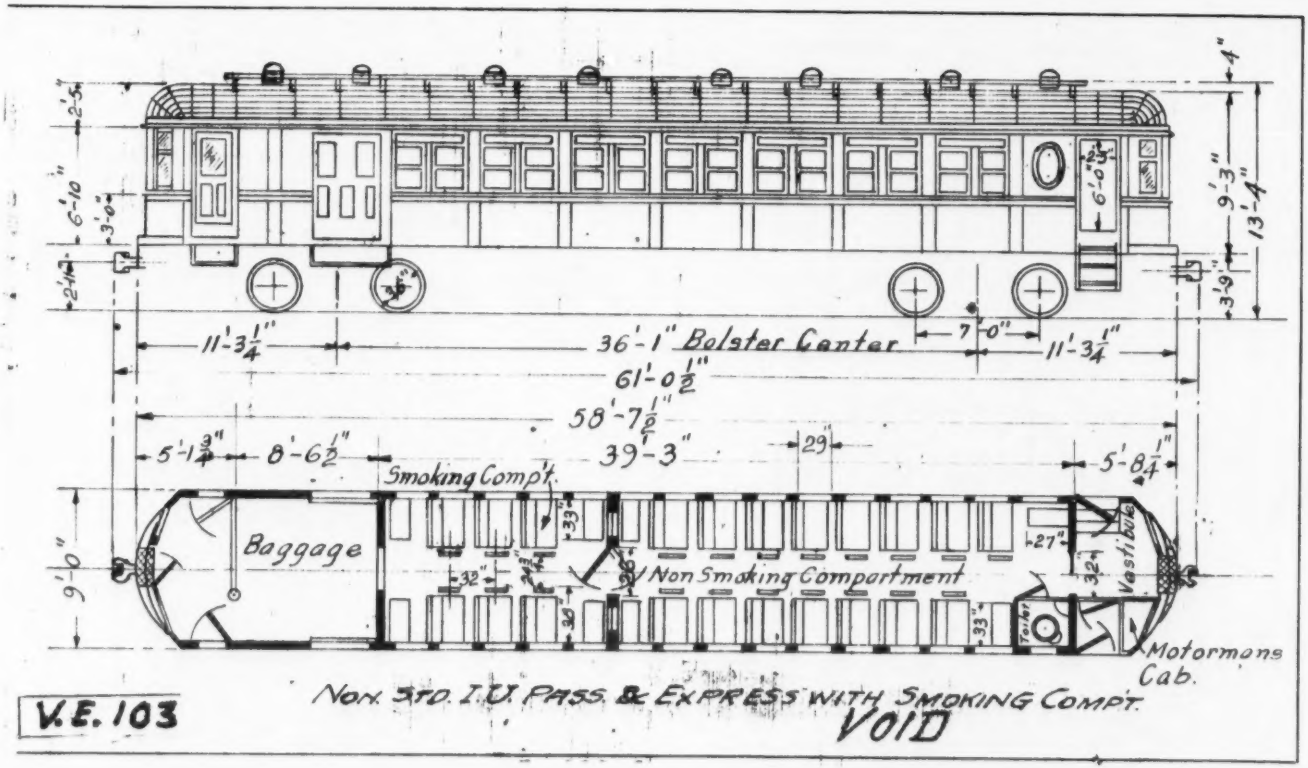


Visalia Electric passenger motor 201 out of service at Exeter.—photo by L. J. Ciapponi.



Visalia Electric freight gas-electric 401 at Exeter.—Ira Swett.

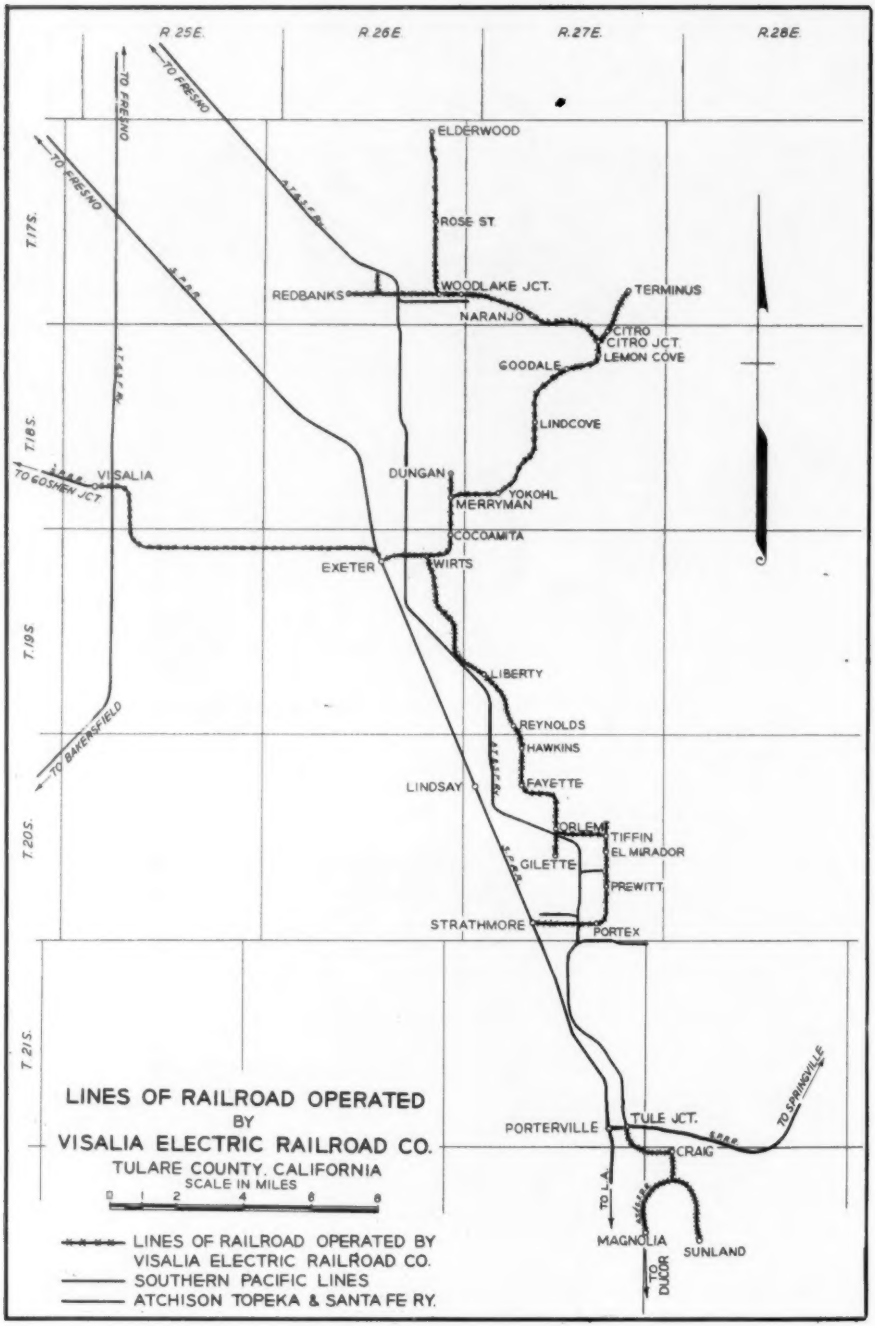
Visalia Electric's 44-ton diesel-electric switcher 501.



V.E. 103

NON STD. I.U. PASS. & EXPRESS WITH SMOKING COMPT.

VOID


R.25E.
R.26E.
R.27E.
R.28E.
T.17S.
T.18S.
T.19S.
T.20S.
T.21S.
TO FRESNO
TO FRESNO
TO BAKERSFIELD
TO GOSHEN JCT.
VISALIA
ELDERWOOD
ROSE ST.
REDBANKS
WOODLAKE JCT.
TERMINUS
NARANJO
CITRO
CITRO JCT.
LEMON COVE
GOODALE
LINDCOVE
DUNGAN
YOKOHL
MERRYMAN
COCOAMITA
EXETER
WIRTS
LIBERTY
REYNOLDS
HAWKINS
FAYETTE
LINDSAY
TIFFIN
EL MIRADOR
GILETTE
PREWITT
STRATHMORE
PORTEX
PORTERVILLE
TULE JCT.
TO SPRINGVILLE
CRAIG
TO L.A.
MAGNOLIA
SUNLAND
TO DUCOR
LINES OF RAILROAD OPERATED
BY
VISALIA ELECTRIC RAILROAD CO.
TULARE COUNTY, CALIFORNIA
SCALE IN MILES
0 1 2 4 6 8
LINES OF RAILROAD OPERATED BY VISALIA ELECTRIC RAILROAD CO.
SOUTHERN PACIFIC LINES
ATCHISON TOPEKA & SANTA FE RY.

ger equipment was 545 miles.

Passenger service between Wirts Jct. and Strathmore was provided by one round trip daily during the period from 1917 to 1920 by a gas-electric combination motor car, built by the General Electric Company, and acquired from the Minnesota, St. Paul, Rochester, and Dubuque Electric Traction Company (Dan Patch Road) in 1916. This car was also operated between East Porterville and Magnolia until Nov., 1917, the car deadheading daily both ways between Strathmore and East Porterville via the Southern Pacific. Passenger and express service was provided between East Porterville to Magnolia for the Visalia Electric by the Southern Pacific once daily using steam equipment from Nov. 27, 1917, until April, 1918, because the cost of deadheading the motor car was prohibitive. After April 30, 1918, all service south of Porterville was discontinued as it did not pay. Frequency of passenger service between Visalia and Woodlake was cut about 1920, and all passenger service was discontinued finally as of October 31, 1924.

Following discontinuance of passenger service, the overhead from Visalia to Exeter was removed in 1925, and freight operation was performed thereafter over that line solely by the Southern Pacific. A portion of the Stratmore line, between El Mirador and Strathmore was abandoned on June 10, 1942, and an additional portion abandoned between Fayette and El Mirador on Nov. 15, 1953. All electric freight operation was abandoned on Nov. 13, 1944, and since then the Visalia Electric has been a dieselized freight carrier.

The portion of the Visalia Electric Railroad from Exeter to Lemon Cove was originally constructed with 50-pound rail. The extensions to Redbanks and Woodlake were constructed with 75-pound rail. The track from Visalia to Exeter, Southern Pacific owned, but then jointly operated, was laid with 90-pound rail. The Visalia Electric Railroad today is laid chiefly with second-hand 90-pound rail. The entire railroad was originally sand ballasted, and little or no difficulty was experienced in spite of the large cars and heavy freight haulage which took place during certain seasons of the year. Rails were bonded at every joint and cross bonds were installed at frequent intervals. The track was of standard gauge, and the railroad had a maximum grade of one per cent.

The overhead construction was of the bracket type throughout with the exception of various spur tracks and car barn approaches when span construction was used. Wood poles with wooden bracket arms were used, and the pole spacing varied from 120 to 150 feet on the tangent, depending on the line, with single catenary suspension having 12 hangers per span. A 3/0 trolley was supported from 7/16 inch steel messenger cable. Both rigid and flexible hangers were used. The trolley wire was maintained at a height of 22 feet above the top of the rail. All motor cars and locomotives were equipped with the sliding shoe type of pantograph trolley, then the recognized standard for alternating current high voltage trolley operation. The upward pressure of the pantograph was maintained at about 10 pounds.

Power was purchased from the Mt. Whitney Power & Electric Company and furnished at 35,000 volts, 3 phase, 60 cycles. It was stepped down to 2200 volts, 3 phase, 60 cycles, and then changed to 11,000 volts, 15 cycles, single

phase by synchronous motor frequency changer sets, in the main frequency-changing substation at Exeter. There were three transformer substations at points along the line. The main substation at Exeter, now sold, was a substantial concrete structure, built in Mission style. It was 56 by 63 feet and was divided longitudinally by a concrete fireproof wall. The frequenc changer sets, switchboard, and exciter being installed in the main section of the building, the transfeormers were in a separate room, and general offices of the company in the remaining section. The car barns and machine shop were housed in a building nearby which was 100 feet by 210 feet in size.

The frequency changers were two in number and were composed each of one 540 horsepower synchronous motor wound for three phase, 60 cycles, 220 volts, AC, with an induction starting motor on an extended shaft, direct-connected to the same shaft and mounted on the same bedplate with one 375 kw. single phase generator, wound for 15 cycles, 11,000 volts. The single phase generator was designed so that by means of a Tirrill regulator, normal voltage was maintained.

The transformers used for stepping down the voltage were 150 kw. oil insulated, water-cooled transformers, wound for single phase and connected delta-delta. The 11,000 volt transmission line to the three transformer substations consisted of two No. 3 B&S gauge copper wire carried on the main trolley poles. The substation transformers stepped down the voltage to 3300 volts, and were of the 300 kw. single phase, 15 cycle, oil-insulated, self-cooling type.

Today there is little to remind one of the one-time glory of the Visalia Electric Railroad. Except for an occasional freight train, pulled by the lone freight diesel engine of the company, the rails lay idle gathering continual rust. Passenger bus service exists to only a very limited extent, and the only reliable transportation left for the passenger is his own private automobile.

EXCURSION NOTES

JUNE 14 — R&LHS Roseville trip cancelled.

JUNE 28 — PRS trip to San Diego cancelled.

JUNE 28 — Tuolumne Jubilee operating four roundtrips Jamestown to Tuolumne with Sierra 28. Tickets on train.

JULY 4-5 — Central Coast trip by air to Nevada Northern.

Central Coast Railway Club, P.O. Box 783, San Jose, Calif.

JULY 18-19 — Cottage Grove, Oregon, Chamber of Commerce plans operation over OP&E line with steam engine. Write CofC.

JULY 26 — Annual JOINT Picnic Train to Big Trees.

California-Nevada Railroad Historical Society, Arthur Lloyd Jr., 974 Pleasant Hill Road, Redwood City, Calif.

AUGUST 16 — Nor-Cal trip via SP to Monterey.

Northern California Railroad Club, Paul Von Hafften, 112 Arguello St., San Francisco 18, Calif.

AUGUST 22 — LA to Hemet to Farmer's Fair by PRS.

Pacific Railroad Society, Box 5279, Metropolitan Station, Los Aneles 55, Calif.

SEPT. 4-8 — PRS LA to Silverton.

SEPT. 4-7 — Central Coast SF to Grand Canyon via Santa Fe.

SEPT. 20 — R&LHS SF to Placerville.

Pacific Coast Chapter, Railway & Locomotive Historical Society, Ed Planer, 469 Crescent St., Oakland 10, Calif.

SEPT. 27 — LA Chap. NRHS, Santa Fe trip to Elsinore.

Los Angeles Chapter, National Railway Historical Society, P.O. Box 3311, Terminal Annex, Los Angeles 54, Calif.

OCT. 4 — Cal-Nevada WP-Feather River Ry. to Feather Falls.

RAILWAY AGE

NORTHERN PACIFIC has ordered 74 70-ton covered hoppers from Pullman - Standard and 25 70-ton covered hoppers from Greenville Steel Co. at a cost of $938,000. The company shops at Brainerd, Minn., will build 40 box cars and 100 insulated box cars at a cost of about $5 million. SANTA FE will build 25 70-ton mechanical refrigerator cars in company shops for late '59 delivery. A $5 million monorail will be built by Lockheed Aircraft for the Seattle Transit Commission of the "supported" type. Three 4-car 96-passenger trains are planned for the one-mile operation between downtown and the 1961 Century 21 Exposition.

The 70-ton gondolas for WESTERN PACIFIC and SACRAMENTO NORTHERN listed last month will be built by ACF instead of Pullman-Standard. GREAT NORTHERN has started work on a 4744-ft. line change 1½ miles west of Merritt, Wash., to cost $350,000 involving diversion of Nason Creek. UNION PACIFIC will install CTC on 80 miles of trackage between Denver and Carr, Colo., at a cost of $2 million, bringing its total CTC mileage to 2089.

The new SANTA FE 800-series Alco 2400-hp road switchers, 24 in number, assigned to the Chicago-Los Angeles freight pool, have a truck-like appearance with a short, low front hood. SANTA FE has ordered 250 70-ton covered hoppers with 100 from Pullman-Standard, 96 from Greenville and 54 from ACF. RIO GRANDE has ordered 15 85-ft. piggyback cars from Pullman-Standard to cost $230,250 for delivery in June. WESTERN PACIFIC ordered 75 50-foot box cars and 25 compartmentizer box cars from Pullman-Standard for June delivery. SANTA FE has ordered 25 baggage cars from its Topeka shops. SOUTHERN PACIFIC has recalled 135 shop employees to resume passenger car refurbishing at a rate of five cars per month at Sacramento, Los Angeles, and Bayshore.

SANTA FE has sent 77 steam engines to the scrapper leaving just four steamers on the property all for historic purposes only.

The CENTRAL PACIFIC has been finally merged into the SOUTHERN PACIFIC by vote of the stockholders at their May meeting in Boston.

SOUTHERN PACIFIC will construct a heavy repair shop at Tucson, Arizona, for Pacific Fruit Express at a cost of $840,000.

UNION PACIFIC has restored the "Challenger" as a separate train as of June 1 for the summer travel season and the SP has restored the "Shasta Daylight" to daily service for the summer.

SANTA FE has asked the ICC for relocation of 81 miles of line in Arizona at a cost of $22.2 million. One section of 44 miles of double track between Crookton and Williams would cost $19.3 million. The other involves construction of a new 37-mile single track on the "Peavine line" between Arba Siding and Skull Valley at a cost of $2.9 million. The "Peavine line" construction would retire 22.5 miles between Prescott and Skull Valley cutting total length of the line by about 14 miles.

NEW INDUSTRIAL LINE

The Santa Fe has been given ok by the ICC to build a 1.67 mile line in Richmond from the shipyard trackage to Point Isabel to serve a new industrial area owned by the Santa Fe.

OAKLAND TERMINAL CUT-BACK FILED

A proposed report has been filed with the ICC for abandonment of freight operations on West Grand Avenue between Adeline and San Pablo by the Oakland Terminal over former Key System tracks. The report recommends abandonment of .58 miles used only to serve a Bekins warehouse.

KEY SYSTEM UNITS SAVED

Six Key System units have been donated by the State Toll Bridge authority to rail-fan groups pending sale of the remaining state-owned units for scrap: 167 went to the Orange Empire Traction; 175 to the Nevada Heritage Foundation; 182 to the Key Route Association; 184 to the Oregon Electric Railway Historical Society; 186 to Bay Area Electric Railroad Association; and 187 to the Railway & Locomotive Historical Society.

NEWS NOTES

The ex-Almanor Railroad diesel 106 was sold as part of the Pondosa, Ore., auction that closed the Valsetz Lumber and ended the 14-mile Big Creek & Telocaset railroad.

Engines under steam in California during May included the Howard Terminal 6, 2-6-2T; Sierra Railroad 3, 4-6-0, and 28, 2-8-0; Quincy Railroad 2, 2-6-2T; Yreka Western 19, 2-8-2; SP 2836 (steam service at 3rd & Townsend for two weeks for official cars); and Feather River Ry.

Feather River Shortline Rail Road engine 8, 2-6-2, was used under steam for the movie "Guns of the Timberland" for Warner Bros., on the WP branch to Blairsden for two weeks in May.

ENGINES AT PROMONTORY

The State of Utah placed two engines on display at Promontory May 9 on the 90th year of the wedding of the rails (one day off). SP 1744, 2-6-0, was placed facing east while an old Union Pacific engine was set facing west.

SOUTHERN PACIFIC NOTES

The ICC has approved the tri-weekly schedule for the "Shasta Daylight" over the protests of the states of Oregon and California. The ICC has also overruled as of May 26 the New Mexico protest to the operation of trains 1 and 4 via Lordsburg instead of Douglas, between Tucson and El Paso. Hearings on the intra-state abandonments in California were heard by the ICC in San Francisco in May with protestants barred from airing charges that the SP was hindering passenger operations.

The Coast Daylight went back to its 8:15 a.m. departure and 6:00 p.m. arrival April 26. The Suntan rate has gone up for 1959 with $3.00 asked for the roundtrip between San Francisco and Santa Cruz. The SP ferry Berkeley has been sold for conversion to a fish reduction plant.

THE WESTERN RAILROADER
"FOR THE WESTERN RAILFAN"
P.O. BOX 668
SAN MATEO, CALIF.
FRANCIS A. GUIDO
Editor-Publisher
Jack Gibson, John P. Carrick
Assistant Editors
Subscriptions: 10 Issues for a Dollar
Single Copy 50c